

Mr. Michael Brown  
Consolidate Grain and Barge Company  
P.O. Box 548  
Mt. Vernon, IN 47620

Re: **129-13957-00014**  
First Significant Permit Revision to  
**MSOP 129-12259-00014**

Dear Mr. Brown:

Consolidate Grain and Barge Company was issued a minor source operating permit on September 12, 2000 for a stationary grain merchandising operation. A letter requesting a revision to this permit was received on February 22, 2001. Pursuant to the provisions of 326 IAC 2-6.1-6 a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the installation of an additional receiving pit to the existing truck only receiving area P1. The proposed receiving pit, identified as P1C, will be enclosed by a building equipped with quick close bifold doors. The emissions from the receiving pit will be collected with an estimated capture efficiency of 95%, controlled by existing baghouse C-2, and exhausted through Stack S2.

The following construction conditions are applicable to the proposed project:

1. The data and information supplied with the application shall be considered part of this permit revision approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Pursuant to IC 13-15-5-3, this approval to construct becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-6.1-6, the minor source operating permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this permit revision which includes this letter, the attached operating conditions applicable to these emission units, and revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Scott Fulton, at OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Scott Fulton or extension (3-5691), or dial (317) 233-5691.

Sincerely,

Original signed by

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments  
SDF

cc: File - Posey County  
Posey County Health Department  
Southwest Regional Office  
Air Compliance Section Inspector - Scott Anslinger  
Compliance Data Section - Karen Nowak  
Administrative and Development - Janet Mobley  
Technical Support and Modeling - Michele Boner

**CONSTRUCTION PERMIT  
and MINOR SOURCE OPERATING PERMIT  
OFFICE OF AIR QUALITY**

**Consolidated Grain and Barge Co.  
Bluff Road  
Mt. Vernon, Indiana 47620**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

This permit is also issued under the provisions of 326 IAC 2-2, 40 CFR 52.21, and 40 CFR 52.124 (Prevention of Significant Deterioration), with conditions listed on the attached pages.

This permit is also issued under the provisions of 326 IAC 2-3 (Emission Offset), with conditions listed on the attached pages

Operation Permit No.: MSOP 129-12259-00014	Date Issued: September 12, 2000
First Significant Permit Revision: MSOP 129-13957-00014	Pages Affected: 4, 17
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 5, 2001

## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

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The Permittee owns and operates a stationary grain merchandising plant.

Authorized Individual: Michael R. Brown  
Source Address: Bluff Road, Mt. Vernon, Indiana 47620  
Mailing Address: P.O. Box 547, Mt. Vernon, Indiana 47620-0547  
Phone Number: 812 - 838 - 6651  
SIC Code: 5153  
County Location: Posey  
County Status: Attainment for all criteria pollutants  
Source Status: Minor Source Operating Permit  
Minor Source, under PSD;  
Minor Source, Section 112 of the Clean Air Act

### A.2 Emissions units and Pollution Control Equipment Summary

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This stationary source is approved to construct and operate the following emissions units and pollution control devices:

- (a) One (1) Truck Only Receiving Area, known as P1, installed in the first quarter of 1978, with a maximum design throughput of 840 tons of grain per hour, including receiving pits P1A, P1B, with emissions controlled by baghouse C-1 and exhausted to Stack S1, and receiving pit P1C, with emissions controlled by baghouse C-2 and exhausted to Stack S2.
- (b) One (1) Truck & Rail Receiving Area, known as P2, installed in the first quarter of 1978, with a maximum capacity: 420 tons of grain per hour.
- (c) One (1) Grain Handling Area, known as P3, exhausted to stack S-2, installed in 1979, controlled by baghouse C-2, capacity: 1,260 tons of grain per hour.
- (d) One (1) natural gas-fired grain dryer, known as P4, exhausted to S-4, installed in 1994, rated at 36.0 million British thermal units per hour, capacity: 84.0 tons of grain per hour.
- (e) One (1) Barge Loadout Area, known as P5, installed in the first quarter of 1978, controlled by a telescoping spout, capacity: 500 tons of grain per hour.
- (f) One (1), Truck Loadout Area, known as P6A, installed in the first quarter of 1978, controlled by a spout extension, capacity: 336 tons of grain per hour.
- (g) One (1) Truck and Rail Loadout Area, installed in 1978, known as P6B, controlled by a spout, capacity: 375 tons per hour.
- (h) Two (2) storage tanks, installed in 1978, capacity: 500 gallons of fuel oil each.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) Truck Only Receiving Area, known as P1, installed in the first quarter of 1978, with a maximum design throughput of 840 tons of grain per hour, including receiving pits P1A, P1B, with emissions controlled by baghouse C-1 and exhausted to Stack S1, and receiving pit P1C, with emissions controlled by baghouse C-2 and exhausted to Stack S2.
- (b) One (1) Truck & Rail Receiving Area, known as P2, installed in the first quarter of 1978, with a maximum capacity: 420 tons of grain per hour.
- (c) One (1) Grain Handling Area, known as P3, exhausted to stack S-2, installed in 1979, controlled by baghouse C-2, capacity: 1,260 tons of grain per hour.
- (d) One (1) natural gas-fired grain dryer, known as P4, exhausted to S-4, installed in 1994, rated at 36.0 million British thermal units per hour, capacity: 84.0 tons of grain per hour.
- (e) One (1) Barge Loadout Area, known as P5, installed in the first quarter of 1978, controlled by a telescoping spout, capacity: 500 tons of grain per hour.
- (f) One (1), Truck Loadout Area, known as P6A, installed in the first quarter of 1978, controlled by a spout extension, capacity: 336 tons of grain per hour.
- (g) One (1) Truck and Rail Loadout Area, installed in 1978, known as P6B, controlled by a spout, capacity: 375 tons per hour.
- (j) One (1) North Merchandising House - Receiving, known as P7, capacity: 336 tons of grain per hour.
- (k) One (1) North Merchandising House - Conveying, known as P8, capacity: 336 tons of grain per hour.
- (l) One (1) North Merchandising House - Loadout, known as P9, capacity: 280 tons of grain per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

## Emission Limitations and Standards [326 IAC 2-6.1-5(1)]

### D.1.1 Particulate Matter (PM) [326 IAC 6-3]

#### (a) Pursuant to 326 IAC 6-3 (Process Operations):

- (1) The allowable PM emission rate from P1, P2 and P3, shall not exceed a total of 80.6 pounds per hour when operating at a process weight rate of 1260 tons per hour.
- (2) The allowable PM emission rate from P4, shall not exceed 49.5 pounds per hour when operating at a process weight rate of 84.0 tons per hour.
- (3) The allowable PM emission rate from P5, controlled by a telescoping spout, shall not exceed 69.0 pounds per hour when operating at a process weight rate of 500 tons per hour.

## **Indiana Department of Environmental Management Office of Air Quality**

### **Technical Support Document (TSD) for a Significant Permit Revision to a Minor Source Operating Permit**

#### **Source Background and Description**

<b>Source Name:</b>	Consolidated Grain and Barge Company
<b>Source Location:</b>	Bluff Road, Mt. Vernon, Indiana 47620
<b>County:</b>	Posey
<b>SIC Code:</b>	5153
<b>Operation Permit No.:</b>	MSOP 129-12259-00014
<b>Operation Permit Issuance Date:</b>	September 12, 2000
<b>Significant Permit Revision No.:</b>	129-13957-00014
<b>Permit Reviewer:</b>	SDF

The Office of Air Quality (OAQ) has reviewed a significant permit revision application from Consolidated Grain and Barge Company relating to the operation of a grain merchandising plant.

#### **History**

On February 22, 2001, Consolidated Grain and Barge Company submitted a request to install an additional receiving pit to the existing truck only receiving area P1. The proposed receiving pit, to be designated as P1C, will convey material to leg 3 to compensate for throughput lost at the leg due to its settling into a less than vertical position.

Truck receiving area P1 currently consists of receiving pits P1A and P1B which convey material to receiving legs 1 and 2, respectively. The combined maximum throughput for area P1 is estimated to be 840 tons/hr. There will be no change in throughput for area P1 as a result of the proposed change. The maximum throughput of leg 3 is estimated to be 12,000 bushels/hr. There will be no change in throughput for leg 3 as a result of the proposed change. Thus, the only increase in emissions will be the particulate matter (PM) and PM10 generated by unloading grain at the new proposed receiving pit.

The proposed receiving pit P1C will be enclosed by a building equipped with quick close bifold doors. The capture efficiency is estimated to be 95%. The emissions from the receiving pit will be collected and controlled by existing baghouse C-2, with the after controls emissions exhausted to stack S2. The material will be conveyed in a totally enclosed conveyor to leg 3.

#### **Existing Approvals**

The source was issued Minor Source Operating Permit (MSOP) (129-12259-00014) on September 12, 2000.

#### **Enforcement Issue**

There are no enforcement actions pending.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S2	P3 Storage and Handling	5	2.5	8,500	70

### Recommendation

The staff recommends to the Commissioner that the Significant Permit Revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application.

### Emission Calculations

For existing country grain elevators, the EPA has determined that a reasonable and realistic “upper limit” estimate of the number of bushels of grain produced to be delivered to the elevator may be considered in identifying the “maximum capacity” of such elevators for the purpose of estimating their potential to emit. The EPA recommends that the PTE be determined based upon an estimate of the maximum amount of grain that could be received during a record crop year in the geographic area served by the elevator. The EPA believes that the highest amount of grain received during the previous 5 years, multiplied by 1.2, will constitute a realistic upper bound on the amount of grain a country elevator could receive. Although this calculation would result in a PTE of 18 million bushels per year the source has requested a 28 million bushels per year per limit.

### UNRESTRICTED POTENTIAL TO EMIT DUE TO THE PROPOSED RECEIVING PIT:

The following calculations determine the unrestricted potential to emit (PTE) based on a maximum throughput of 28 million Bu/yr (784,000 tons/yr), emission factors from AP-42, Table 9.9.9-1, and emissions before controls.

**PM:**  $784,000 \text{ tons/yr} * 0.18 \text{ lb/ton} * 1/2000 \text{ ton/lb} = 70.56 \text{ tons PM/yr}$

**PM10:**  $784,000 \text{ tons/yr} * 0.059 \text{ lb/ton} * 1/2000 \text{ ton/lb} = 23.13 \text{ tons PM10/yr}$

### POTENTIAL EMISSIONS AFTER CONTROLS:

The potential emissions after controls are the sum of the fugitive emissions from the pit and the emissions out of the baghouse. The following calculations determine the emissions after controls based on the above estimated unrestricted potential to emit, 95% capture at the pit, an outlet grain loading of 0.005 gr/dscf, 17,500 dscfm, and 8,760 hours of operation.

**PM:**

$70.56 \text{ tons PM/yr} * (1.00 - 0.95) = 3.53 \text{ tons/yr}$

$0.005 \text{ gr/dscf} * 17,500 \text{ dscf/min} * 60 \text{ min/hr} * 8760 \text{ hr/yr} * 1/7000 \text{ lb/gr} * 1/2000 \text{ ton/lb} = 3.29 \text{ tons/yr}$

$3.53 \text{ tons/yr} + 3.29 \text{ tons/yr} = 6.82 \text{ tons PM/yr}$

### PM10:

23.13 tons PM10/yr \* (1.00 - 0.95) = 1.16 tons/yr  
 0.005 gr/dscf \* 17,500 dscf/min \* 60 min/hr \* 8760 hr/yr \* 1/7000 lb/gr 1/2000 ton/lb = 3.29 ton/yr  
 1.16 tons/yr + 3.29 tons/yr = **4.45 tons PM10/yr**

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA.”

This table reflects the PTE before controls due to the modification based on the above estimated emissions calculations. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	70.56
PM-10	23.13
SO <sub>2</sub>	-
VOC	-
CO	-
NO <sub>x</sub>	-

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

### Justification for Revision

The MSOP is being revised through a Significant Permit Revision. This revision is being performed pursuant to 326 IAC 2-6.1-6(i)(1)(E), which states a significant permit revision is a modification that is not an administrative amendment under section 10 of this rule or subject to subsection (g) (Minor Permit Revision) and includes any modification with a potential to emit (PTE) greater than or equal to twenty-five (25) tons per year of PM, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, H<sub>2</sub>S, TRS, reduced sulfur compounds, or fluorides. The PTE of PM exceeds 25 tons per year. Thus, a significant revision is required.

### County Attainment Status

The source is located in Posey County.

Pollutant	Status
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment



- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Posey County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Posey County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions

Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

#### Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	54.40
PM <sub>10</sub>	26.70
SO <sub>2</sub>	0.10
VOC	0.87
CO	13.20
NO <sub>x</sub>	15.80

HAPs	Potential to Emit (tons/yr)
Benzene	0.0003
Dichlorobenzene	0.0002
Formaldehyde	0.012
Hexane	0.284
Toluene	0.0005
Lead	0.00008
Cadmium	0.0002
Chromium	0.0002

Manganese	0.00006
Nickel	0.0003
Total	0.298

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the limited emissions table in the Technical Support Document (TSD) to F129-12259-00014.

### Potential to Emit of Source After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this FESOP revision.

	Potential to Emit (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Existing Source PTE	54.40	26.70	0.10	0.87	13.20	15.80	0.30
Proposed Receiving Pit	6.82	4.45	-	-	-	-	-
Total	<b>61.22</b>	<b>31.15</b>	<b>0.10</b>	<b>0.87</b>	<b>13.20</b>	<b>15.80</b>	<b>0.30</b>

Part 70 Major Source Threshold	-	100	100	100	100	100	10 ind. 25 tot.
PSD Threshold Level	250	250	250	250	250	250	-

- (a) This revision to an existing minor stationary source is not major because the emissions after the modification are less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) Since the potential to emit from the entire source is less than 250 tons per year of each criteria pollutant, the source is a minor source pursuant to 326 IAC 2-2, PSD.
- (c) This revision to the existing MSOP will not change the status of the stationary source because the emissions from the entire source will still be limited to less than the Part 70 major source thresholds.

### Federal Rule Applicability

#### New Source Performance Standards:

There are no New Source Performance Standards (NSPS) that become applicable to this proposed revision.

### **National Emission Standards for Hazardous Air Pollutants (NESHAP):**

There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 326 IAC 20, and 40 CFR Part 61 and 40 CFR Part 63) applicable to this proposed revision.

### **State Rule Applicability**

#### **Entire Source:**

There are no entire source state rules that become applicable due to this proposed revision. The unit is part of the existing truck only receiving area P1. The preventive maintenance plan (326 IAC 1-6-3), opacity limitations (326 IAC 5-1), and fugitive dust limitations already apply. In addition, the emission reporting requirements of 326 IAC 2-6 still do not apply because the source PM10 PTE after the proposed revision are still less than 100 tons per year.

#### **Individual Facilities:**

There are no individual facility state rules that become applicable due to this proposed revision. The proposed receiving pit will become part of the existing truck receiving area which is already limited under 326 IAC 6-3.

### **Compliance Requirements**

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The proposed receiving pit will be part of existing truck receiving area and the PM and PM10 emissions will be controlled by existing baghouse C2. There will be no new compliance requirements because the compliance requirements of the existing truck receiving area will apply to the proposed receiving pit and baghouse C2 will be subject to its existing compliance monitoring requirements.

To accommodate the proposed changes, the source will be adding a new baghouse with the same outlet grain loading, but with an increased air flow rate from 8,500 dscfm to 17,500 dscfm.

Pursuant to the stack testing guidance, November 18, 1996, stack testing is not required because the proposed revision is:

- (1) not construction or operation without an operating permit (CWOP/OWOP) to a source with an applicable National Emission Standard for Hazardous Air Pollutants (NESHAP) or New Source Performance Standards (NSPS),
- (2) not associated with a source that is non-compliant with any limit or requirement,
- (3) not a revision where the major pollutant emissions (PM = 70.56 tons/yr) are greater than 40% of the PTE before controls ( $0.40 * 230 = 92$  tons PM/yr), and
- (4) the compliance monitoring plan does not require testing to develop control device parameters to demonstrate compliance.

### Proposed Changes

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

The emission unit summary shall be revised to include proposed receiving pit P1C.

#### A.2 Emissions units and Pollution Control Equipment Summary

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This stationary source is approved to construct and operate the following emissions units and pollution control devices:

- (a) One (1) Truck Only Receiving Area, known as P1, installed in the first quarter of 1978, **with a maximum design throughput of 840 tons of grain per hour, including receiving pits P1A, P1B, with emissions exhausted to stack S-1, controlled by baghouse C-1 and exhausted to Stack S1, and receiving pit P1C, with emissions controlled by baghouse C-2 and exhausted to Stack S2** capacity: 840 tons of grain per hour.

The summary of Section D.1 also be revised to include proposed receiving pit P1C.

### Emissions Unit Description:

- ~~(a) One (1) Truck Only Receiving Area, known as P1, installed in the first quarter of 1978, exhausted to stack S-1, controlled by baghouse C-1, capacity: 840 tons of grain per hour.~~
- (a) One (1) Truck Only Receiving Area, known as P1, installed in the first quarter of 1978, **with a maximum design throughput of 840 tons of grain per hour, including receiving pits P1A, P1B, with emissions exhausted to stack S-1, controlled by baghouse C-1 and exhausted to Stack S1, and receiving pit P1C, with emissions controlled by baghouse C-2 and exhausted to Stack S2** capacity: 840 tons of grain per hour.

### Conclusion

The operation of this stationary grain merchandising plant shall be subject to the conditions of the attached proposed MSOP Permit No. MSOP 129-13957-00014.